

A New *Obrium* (Coleoptera, Cerambycidae) from the Korean Peninsula

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Abstract A new longicorn beetle belonging to the genus *Obrium* DEJEAN, *O. coreanum* sp. nov., is described from the Korean Peninsula. The new species may be similar in external appearance to *O. cantharinum* (LINNAEUS), but can be easily distinguished from the latter by the large transverse head and the bicoloured legs and antennae.

Introduction

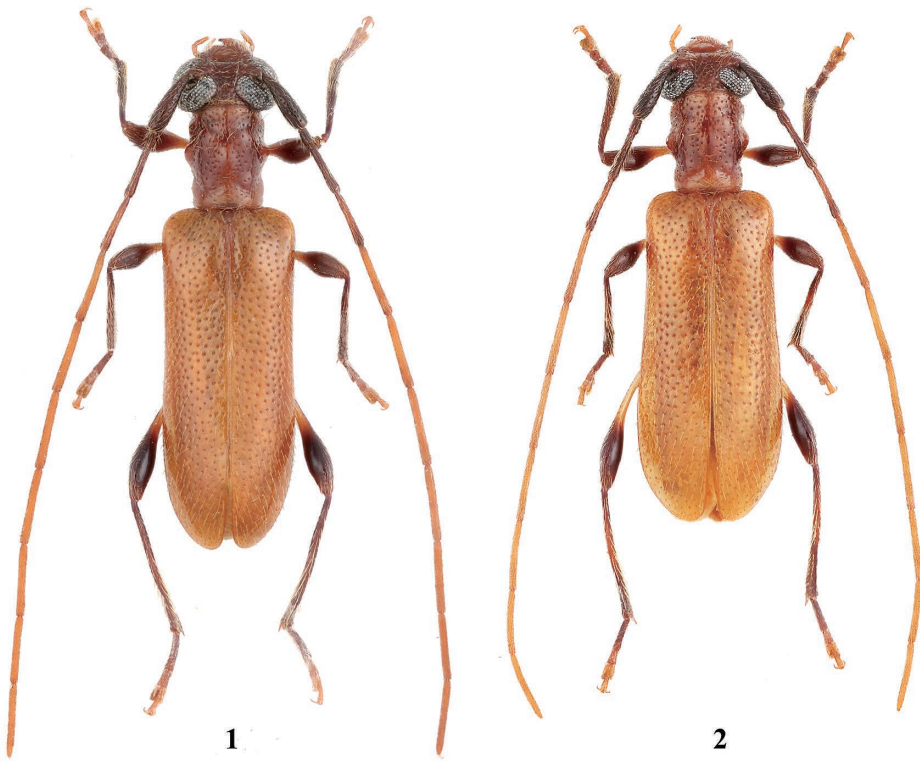
In 2012, through the National Institute of Biological Resources, Incheon, we had known the existence of a type specimen labeled as “*Obrium kaszabi* HAYASHI” collected from Korea about 40 years ago and preserved in the Hungarian Natural History Museum, Budapest. After that, thanks to Dr. Ottó MERKL of the Hungarian museum, we got the photo images of the specimen with its labels. Immediately, it was revealed that the *Obrium* in question is an undescribed taxon since there is no publication record of “*O. kaszabi* HAYASHI” in the basis of this type specimen.

On the other hand, an unknown *Obrium* species was recently collected from Gangwon-do in central Korea. It is quite different from the two known members of the genus from Korea, *O. brevicorne* (PLAVILSTSHIKOV, 1940, p. 138) and *O. obscuripenne* (PIC, 1904, p. 17), though rather similar in external appearance to *O. cantharinum* (LINNAEUS, 1767, p. 637) widespread in the Palaearctic Region. During the field surveys in 2013 and 2014, we obtained a number of specimens of the *Obrium* in question for taxonomical examination. In short, we concluded that it agreed with “the type specimen” preserved in the Hungarian museum as a new species of the genus.

Materials and Methods

The material examined were obtained during the field surveys in Gangwon-do in central Korea in 2013 and 2014 by S.-H. LEE and S.-H. OH. The type specimen of “*Obrium kaszabi* HAYASHI” with labels preserved in the Hungarian Natural History Museum, Budapest (HNHMB) was examined based on its fine colour images which were taken by Ottó MERKL. The holotype and allotype designated herein will be preserved in the National Institute of Biological Resources, Incheon (NIBR) and the paratypes are in the private collection of S.-H. LEE (SL), T. NIISATO (TN) and S.-H. OH (SO).

The abbreviations used for the ratio of the measurement in the description are as follows: HW – head width across eyes; PL – length of pronotum; PW – maximum width of pronotum across lateral swellings; PA – apical width of pronotum; PB – basal width of pronotum; EL – length of elytra; EW – humeral width of elytra; M – arithmetic mean.



Figs. 1–2. *Obrium coreanum* sp. nov. from Gangwon-do, central Korea. — 1, Male, holotype; 2, female, paratype.

Taxonomy

Obrium coreanum sp. nov.

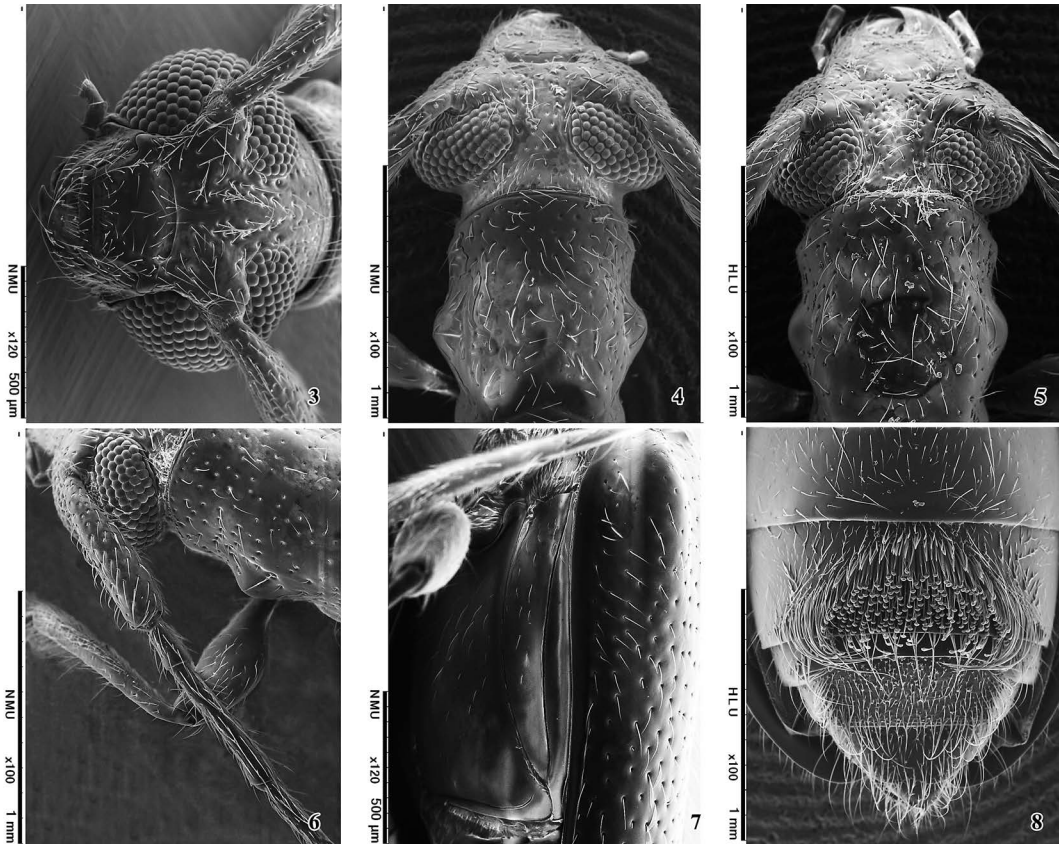
[Korean name: Geom-eun-da-ri-yeot-ha-neul-so]

(Figs. 1–16)

Obrium sp.: JANG *et al.*, 2015: 172, figs.

Obrium kaszabi: HWANG, 2015: 151, figs. (unavailable name).

Small to medium-sized species of bicoloured legs and antennae. Colour reddish brown to reddish yellow, moderately shiny; head reddish brown, black in eyes and inner margins of mandibles; antennae dark brown in three basal segments, dark reddish brown with infuscate apex in segment 4, light yellowish brown in seven apical segments, though segments 5–6 or 7 more or less infuscate at apices; legs dark brown, pale yellow in peduncles of femora, light yellowish brown in claws and 3rd segments of tarsi. Body in general sparsely clothed with pale yellow hairs, the hairs are more or less erect; antennae with scape moderately with semilong waved hairs, segments 2–4 rather densely with long hairs, seven apical segments densely pubescent; pronotum sparsely with long hairs, mostly on



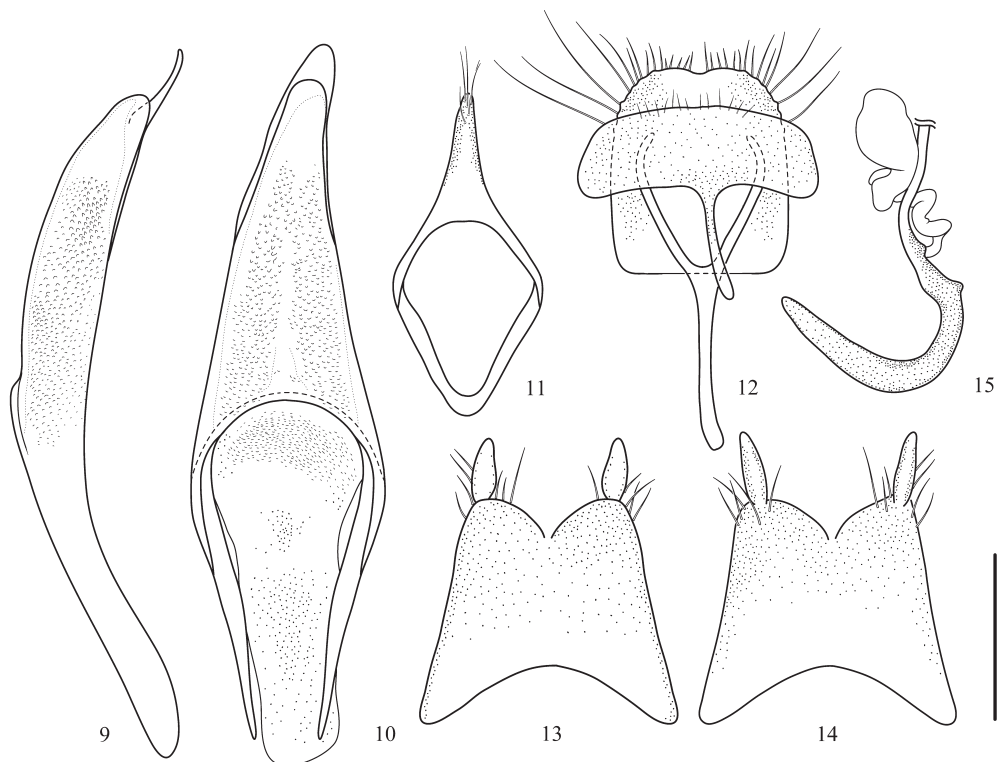
Figs. 3–8. *Obrium coreanum* sp. nov. from Gangwon-do, central Korea (SEM images). — 3, Head, frontal view; 4, 5, head and pronotum, dorsal view; 6, antennal segments 1–5; 7, meso- and metathoraces, lateral view; abdomen, ventral view. — 3, 4, 6, 7, Male; 5, 8, female.

apical half; scutellum completely bared; elytra moderately uniformly haired throughout; ventral surface very sparsely haired; legs rather densely with semilong hairs.

Male. Body length: 4.4–6.0 mm (from apical margin of clypeus to elytral apices).

Head transversely globose including prominent eyes, sparsely provided with medium-sized punctures, HW/PA 1.41–1.53 (M 1.47), HW/PW 1.22–1.31 (M 1.26); frons almost half the length of apical width, slightly narrowed apicad, gradually raised towards sides, with a fine median groove; clypeus scattered with a few small punctures, with basal margin gently arcuate; mandibles broad and stout, acute at apices; eyes separated from one another by half the width of each lobe. Antennae fine, relatively long, 1.5 times as long as body, surpassed the elytral apices at apex of segment 9; scape long, flattened above, sparsely punctured, about 1.2 times as long as segment 3, segments 3–5 slightly thickened at apices, gradually increased in length, segment 6 the longest though a little longer than the preceding, segments 6–10 almost fili-formed, terminal segment gently arcuate.

Pronotum slightly longer than wide, slightly divergent apicad; PL/PA 1.37–1.47 (M 1.41), PL/PW 1.16–1.24 (M 1.21), PA/PB 1.07–1.11 (M 1.09), PL/EL 0.31–0.33 (M 0.32), PW/EW 0.62–0.69 (M 0.65); sides weakly arcuate just behind apex, then almost parallel to prominent lateral tubercles near middle, and also almost parallel in basal fourth; disc moderately convex, faintly raised at sides of



Figs. 9–15. Genital organs of *Obrium coreanum* sp. nov. from Gangwon-do, central Korea. — 9, Median lobe, lateral view; 10, ditto, dorsal view; 11, tegmen, dorsal view; 12, 8th abdominal segment, ventral view; 13, ovipositor, dorsal view; 14, ditto, ventral view; 15, spermatheca with duct. — 9–12, Male; 13–15, female. Scale: 0.25 mm.

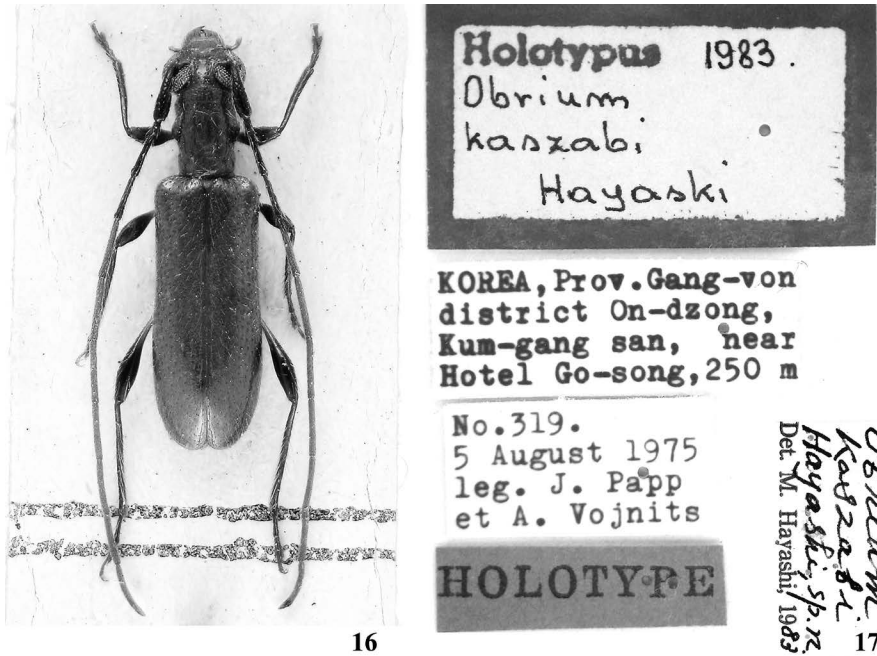
apical $3/8$, moderately so at centre behind middle, irregularly scattered with rather large punctures except for these raised parts, with depressed part in basal fourth almost smooth though more or less rugose near the anterior margin. Scutellum elongate-trapezoidal, smooth on surface.

Elytra moderate in length, weakly broadened apicad in sinuate line, with completely rounded apices, EL/EW 2.36–2.57 (M 2.49); disc almost flattened though raised in apical fifth near suture, strongly depressed near humeri, hardly depressed near suture behind scutellum, provided with rather large punctures in irregular rows, the punctures become shallow and sparse in apical fourth.

Venter of thoraces sparsely scattered with fine punctures; prosternal process compressed as a thin plate between coxae; mesosternal process very narrow, almost parallel-sided, reaching the apical part of metasternum; metepisternum depressed in about external half beyond the longitudinal groove. Abdomen punctured as on thoraces; 3rd sternite nearly twice the length of the following sternite; anal sternite widely truncate in gently arcuate line at apical margin.

Legs moderate in length, not so stout; hind femur moderately clavate in apical half; 1st segment of hind tarsus 1.3 times as long as the following two segments combined.

Male genitalia: Median lobe proto-type without specialised structure, about $1/3$ the length of elytra, slender, slightly convex and slightly arcuate in profile; apical lobe in dorsal view narrowly produced and slightly bent to right in apical $2/5$, distinctly exposing the apical part of ventral plate, which



Figs. 16–17. “Holotype” of *Obrium kaszabi* HAYASHI preserved in the Hungarian Museum of Natural History. — 16, Female specimen labeled as holotype; 17, labels.

is slightly turned up in lateral view; median struts half the length of median lobe. Tegmen uni-lobed, strongly attenuate to apex which is provided with six to seven setae. Eighth tergite distinctly longer than wide, rounded at apical margin which has a small concavity at apex, provided with four to five long setae at sides and short setae near middle. Eighth sternite markedly transverse, 1.4 times as wide as tergite, gently arcuate at apical margin, which has several short setae.

F e m a l e. Body length: 4.7–5.8 mm (from apical margin of clypeus to elytral apices).

Body slightly broader than in male. Head not so transverse including eyes; eyes separated from one another by $\frac{2}{3}$ the width of each lobe. Antennae a little shorter, 1.3–1.4 times as long as body, surpassed elytral apices at middle of segment 9. Pronotum a little longer than the maximum width across lateral tubercles. Elytra slightly shorter. Fourth sternite of abdomen with rake organ well developed, $\frac{3}{5}$ the width of sternite. Standard ratios of body parts are as follows: HW/PA 1.39–1.41 (M 1.40), HW/PW 1.21–1.31 (M 1.26), PL/PA 1.31–1.41 (M 1.37), PL/PW 1.17–1.28 (M 1.23), PA/PB 1.06–1.17 (M 1.09), PW/EW 0.63–0.66 (M 0.64), PL/EL 0.31–0.33 (M 0.32), EL/EW 2.43–2.49 (M 2.44).

Female genitalia: Ovipositor short, almost trapezoidal; coxite lobe absent; stylus elongate semi-circular, relatively large. Spermatheca ordinary C-shaped, very narrow, with a small tubercle near base of external side; gland coiled in basal half and expanded in apical half; duct slightly sinuate.

Type series. Holotype: ♂ (in NIBR), Osaek-ri, N38°07′/E128°49′, Yangyang-gun, Gangwon-do, Korea, 7.VII.2013, S.-H. OH leg. Paratypes: 1 ♂ (in TN), 1 ♀ (allotype) (in NIBR), same data as for the holotype; 2 ♂♂, 2 ♀♀ (in SO), same locality and collector as for the holotype, 26.VI.2014; 2 ♂♂ (in SL), Gajeong-ri, N37°76′/E127°60′, Chuncheon-si, Gangwon-do, 25.VI.2013, S.-H. LEE leg.; 1 ♂, 1 ♀ (in SO), same locality as the preceding, 17.VI.2014, S.-H. OH leg.

Other specimen examined. 1 ♀ (in HNHMB), “Holotypus 1983. *Obrium kaszabi* Hayashi [sic]

(white card with red margin)” “KOREA, Prov. Gang-von district On-dzong, Kum-gang san, near Hotel Go-song, 250 m ” “No. 319. 5 August 1975 leg. J. Papp et A. Vojnits” “HOLOTYPE (red card)” “*Obrium kaszabi* HAYASHI, sp. nov. (hand writing by M. HAYASHI) Det. M. Hayashi, 1983”.

Etymology. The name of this new species is derived from the country of its type locality.

Distribution. Korean Peninsula.

Notes. The true affinity of *Obrium coreanum* sp. nov. is uncertain since we could not find any close relative among members of the genus. It may be similar in external appearance such as the reddish body with the infuscate legs and antennae to *O. cantharinum* (LINNAEUS) widespread in the Palearctic Region, but can be easily distinguished from the latter by the bicoloured legs and antennae instead of almost unicoloured brown ones, and the large and transverse head especially in the male of the latter.

The type series were collected from Osaek-ri and Gajeong-ri of Gangwon-do in central Korea. Most of the specimens from Osaek-ri were found on blossoms of *Castanea crenata* SIEBOLD & ZUCC. The adult beetles appear in a period at least from mid June to early July according to the data of type series collected from central Korea, though the female specimen preserved in the Hungarian Museum of Natural History was collected in mid August which seems exceptionally late.

HWANG (2015) cited “*Obrium kaszabi* HAYASHI [sic], 1983” with the colour images and a brief description in his iconographical book on the ground of “the type specimen” with labels preserved in the Hungarian Natural History Museum, Budapest. JANG *et al.* (2015) also recorded the same species as “*Obrium* sp.” in their iconographical book. However, according to Article 72.4.7 in the 4th edition of the International Code on Zoological Nomenclature (ICZN 1999), “*Obrium kaszabi*” is an unavailable name without publication since it is described only in the labels of “the type specimen” preserved in the Hungarian museum.

Acknowledgements

We would like to thank Messrs. Hyun-Kyu JANG, Seung-Hyun LEE and Hae-Yong OH for offering us the specimens and/or the information used in the present study. Thank are also due to Dr. Ottó MERKL of the Hungarian Natural History Museum, Budapest for offering us the useful information and taking picture of the type specimen of “*Obrium kaszabi* HAYASHI” preserved in his museum.

要 約

新里達也・呉升煥：朝鮮半島で見つかったムナミゾアメイロカミキリ属（鞘翅目カミキリムシ科）の1新種。——— 韓国中部から得られた標本に基づき、*Obrium coreanum* sp. nov. を記載した。本新種に直接の類縁関係をもつ種は知られていないが、旧北区に広く分布するアカオニアメイロカミキリ *O. cantharinum* (LINNAEUS) が、触角と肢が同じように暗化する点でやや似ているかもしれない。しかし、本新種は、触角第5節以降が明黄褐色でさらに腿節柄部が明黄色であること、とくに♂で頭部は大きくはるかに横長であるなどの特徴から、その同定を誤ることはない。

本種の存在が知られることになったのは、ハンガリー自然史博物館に所蔵される Korea 産の1♀の標本が契機であった。この標本には、故・林匡夫博士の直筆による “*Obrium kaszabi* Hayashi, 1983” のラベルが付けられていて、タイプ標本に相当するものと思われるが、この標本を担名タイプとして本名称が出版されたことはない。HWANG (2015) は、この *Obrium kaszabi* の名称を引用して本種を図示しているが、前述のように、本名称は標本に付けられたラベルに記載があるだけで、国際動物命名規約の要件を満たさない不適格名である。

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